

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Panin G.

Confirmation No.: 5953

Serial No. : 10/579,814

Filed : October 13, 2006

Art Unit : 1619

Examiner : Mattison, L.K.

For : **COSMETIC AND/OR DERMATOLOGICAL
COMPOSITIONS CONTAINING POLYPHENOLS
STABILIZED BY PERFLUOROPOLYETHER
PHOSPHATES AND USE OF PERFLUOROPOLYETHER
PHOSPHATES AS STABILIZING AGENTS FOR
POLYPHENOLS**

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Commissioner for Patents
Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 C.F.R. §41.37

This is an appeal from the rejection of claims 16-38 and 42 made in the Final Office Action issued on February 3, 2011 in the referenced application. For the reasons discussed below, Appellant requests reversal of the rejections of the claims and allowance thereof.

A Notice of Appeal and a petition for a two month extension have been filed on June 21, 2011, making the filing of this Appeal Brief timely.

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I. REAL PARTY IN INTEREST

The real party in interest is **BIO.LO.GA.** of Conegliano (Treviso), Italy, the assignee of record.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

Claims 16-38 and 42 are currently rejected and are presented on appeal.

Claims 1-15 have been previously cancelled.

Claims 39-41 have been previously withdrawn from consideration.

A copy of the claims presented on appeal is attached in Section VIII, Claims Appendix.

IV. STATUS OF THE AMENDMENTS

An After Final Amendment has been filed subsequent to the Final Office Action of February 3, 2011 and was entered for purposes of appeal.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 16 recites a cosmetic and/or dermatologic composition comprising polyphenols associated with a carrier, wherein the polyphenols is stabilized against oxidative degradation by the presence, in the composition, of at least one perfluoropolyether phosphate.

Support for independent claim 16, as pending, is found on page 4 lines 10-14 and from page 5, line 30 to page 6 line 10 of the specification as originally filed.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

- A) Whether claims 16, 20-21, 23 and 38 are unpatentable under 35 U.S.C. § 103(a) over EP 1,074,243 to Pantini (hereinafter “Pantini”) in view of U.S. Patent No. 6,066,311 to Cheetam et al. (hereinafter “Cheetam”).
- B) Whether claims 17-19, 22, 24 and 42 are unpatentable under 35 U.S.C. § 103(a) over Pantini and Cheetam and further in view of Schliemann-Willers as published in *Acta Dermato-Venereologica* in 2001 (hereinafter “Schliemann-Willers”) and as evidenced by the Fomblin HC/P2-1000 product information sheet as dated 09/2005 by Solvay Solexis (hereinafter “Fomblin”).
- C) Whether claims 25-30 are unpatentable under U.S.C. § 103(a) over Pantini, Cheetam, Schliemann-Willers and as evidenced by Fomblin and further in view of U.S. Patent No. 5,945,090 to Randall et al. (hereinafter “Randall”).
- D) Whether claims 35 and 36 are unpatentable under U.S.C. § 103(a) over Pantini, Cheetam, Schliemann-Willers and Randall as evidenced by Fomblin in further in view of U.S. Patent No. 6,015,548 to Siddiqui et al. (hereinafter “Siddiqui”).
- E) Whether claims 31-34 and 37 are unpatentable under U.S.C. § 103(a) over Pantini, Cheetam, Schliemann-Willers, Randall and Siddiqui as evidenced by Fomblin and further in view of U.S Patent No. 6,007,796 to Menzel et al. (hereinafter “Menzel”).

VII. ARGUMENT

A) Claims 16, 20-21, 23 and 38 are patentable over Pantini in view of Cheetam

Pending claims 16, 20-21, 23 and 38 are rejected under 35 U.S.C. § 103(a) for allegedly being obvious over Pantini in view of Cheetam (*e.g.*, page 3 of the Final Office Action).

Appellant discusses below the errors made by the Examiner and how, in view of these errors, the subject matter of claims 16, 20-21, 23 and 38 would not have been rendered obvious by the combination of the cited references.

Independent claim 16 is directed to a composition comprising polyphenols and an amount of at least one stabilizing perfluoropolyether capable of preventing the oxidative degradation of the polyphenols (*e.g.*, page 4 lines 10-14 and from page 5, line 30 to page 6 line 10).

Pantini does not disclose Applicant's invention. Pantini only provides for monobasic concentrated compositions containing (per)fluoropolyethers which are added to emulsions oil/water or water/oil for obtaining stable emulsions usable for multiple purposes (*e.g.*, page 2, paragraph [0001], page 4, paragraph [0025] and page 5, paragraph [0031]). These emulsions are considered "stabilized" in that no separation of phases occurs (*e.g.*, page 5, paragraph [0031]).

As set forth above, Pantini describes a myriad of purposes for the composition described therein, such as skin protection against irritating agents and sun radiation, hair protection, hair treatment, detergency, deodorants, after-shaves, disinfectants for external use, nail-varnish removal and make up (*e.g.*, page 4, paragraph [0025]).

However, Pantini is completely silent with regards to polyphenols and the need to stabilize them against oxidative degradation.

Cheetam does not correct Pantini's deficiencies. Cheetam only discloses the use of caffeic acid and derivatives as sunscreen additives (*e.g.*, col. 1, lines 3-5).

Nevertheless, in the Final Office Action the Examiner has taken the position that Pantini's description of the perfluoropolyether disclosed also in Examples 1-3 of the present application is sufficient to provide the motivation to combine the teachings of Pantini with the teachings of Cheetam.

Appellant respectfully disagrees with this reasoning.

Obviousness can be established only by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006).

As set forth above, Pantini only discloses "stability" in the context of "emulsion stability" not in the context of prevention of polyphenols' degradation. Moreover, as also discussed above, Pantini describes a myriad of purposes for which its composition could be used.

Thus, a person skilled in the art would not know to which of the many uses of Pantini's composition adding the caffeic acid of Cheetam and for which purpose.

In other words, a person skilled in the art would find no motivation of adding caffeic acid described in Cheetam to obtain advantageous UV absorption for example in a deodorant or nail-varnish removal composition. Therefore, it is respectfully submitted

that only with the help of the impermissible hindsight the combination of Pantini and Cheetam could render obvious the presently claimed subject matter.

Furthermore, even where a general method that could have been applied to make the claimed product was known and within the level of the ordinary artisan, the claim may nevertheless be nonobvious if the problem which had suggested use of the method had been previously unknown. *In re Omeprazole Patent Litigation*, 536 F.3d 1361 (Fed. Cir. 2008).

Neither Pantini nor Cheetam recognizes the problem of oxidative degradation of phenols. Accordingly, since the advantages provided by the presently claimed invention had not been recognized by the cited references, they cannot be combined to render obvious the presently claimed subject matter.

Appellant also respectfully submits that the Examiner's reasoning in the Advisory Action issued on May 18, 2011 is circular. Specifically, the Examiner has taken the position that because Pantini explicitly teaches using sun filters in sun protective gels, an artisan would be motivated to add the caffeic acid described by Cheetam to the composition described by Pantini. However, for the following reasons, it is respectfully submit that this statement is flawed and incorrect.

First, as submitted above, Pantini discloses many different applications for its composition, one of which is a sun cream gel which already comprises UV filters (*e.g.*, page 10). Thus, one skilled in the art would find no motivations for adding an additional UV filter to the composition disclosed by Pantini.

Second, exactly because Pantini already discloses a sun cream with UF filter, but it also discloses other applications for its composition, one skilled in the art would not know to what to add the caffeic acid and for which purpose.

Third, as submitted above, the combination of cited references does not recognize the problem of oxidative phenols degradation prevented by the presence of perfluoropolyether phosphates. The fact that Pantini includes perfluoropolyether in its composition in addition to UV screening substances, render the allegedly combination with Cheetam improper because based on hindsight. Since the perfluoropolyether described by Pantini has the only purpose of improving the stability of the emulsion, a person skilled in the art would not even consider adding caffeic acid to the composition of Pantini which already comprises UV screening substances of chemical or physical types as butylmethoxybenzoylmethane, octylmethoxycinnamate or titanium dioxide.

Thus, for all of these reasons, it is respectfully submitted that Pantini and Cheetam cannot be combined as proposed by the Examiner to render obvious the subject matter of claim 16, 20-21, 23 and 38. Accordingly, the rejection of claims 16, 20-21, 23 and 38 under 35 U.S.C. § 103(a) is untenable and improper.

B) Claims 17-19, 22, 24 and 42 are patentable over Pantini and Cheetam and further in view of Schliemann-Willers as evidenced by Fomblin

If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. *In re Fine*, F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). For the reasons set forth above, claim 16 is patentable over the combination of Pantini with Cheetam. Moreover, claim 16 is not rejected over the combination of Pantini and Cheetam in view of Schliemann-Willers as evidenced by Fomblin. Thus, claims 17-19, 22, 24 and 42, which depend either directly or indirectly from claim 16, are also patentable over the combination of Pantini and Cheetam in view of Schliemann-Willers as evidenced by Fomblin.

Accordingly, Appellant respectfully requests that this rejection be overturned.

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C) Claims 25-30 are patentable over Pantini, Cheetam, Schliemann-Willers as evidenced by Fomblin and further in view of Randall

If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. *In re Fine*, F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). For the reasons set forth above, claim 16 is patentable over the combination of Pantini with Cheetam. Moreover, claim 16 is not rejected over the combination of Pantini, Cheetam, Schliemann-Willers as evidenced by Fomblin and further in view of Randall. Thus, claims 25-30, which depend either directly or indirectly from claim 16, are also patentable over the combination of Pantini, Cheetam, Schliemann-Willers as evidenced by Fomblin and further in view of Randall.

Accordingly, Appellant respectfully requests that this rejection be overturned.

D) Claims 35-36 are patentable over Pantini, Cheetam, Schliemann-Willers and Randall, as evidenced by Fomblin and further in view of Siddiqui

If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. *In re Fine*, F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). For the reasons set forth above, claim 16 is patentable over the combination of Pantini with Cheetam. Moreover, claim 16 is not rejected over the combination of Pantini, Cheetam, Schliemann-Willers and Randall as evidenced by Fomblin and further in view of Siddiqui. Thus, claims 35-36 which depend either directly or indirectly from claim 16 are also patentable over the combination of Pantini, Cheetam, Schliemann-Willers and Randall, as evidenced by Fomblin and further in view of Siddiqui.

Accordingly, Appellant respectfully requests that this rejection be overturned.

E) Claims 31-34 and 37 are patentable over Pantini, Cheetam, Schliemann-Willers, Randall and Siddiqui as evidenced by Fomblin and further in view of Menzel

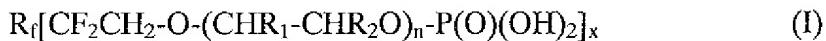
If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. *In re Fine*, F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). For the reasons set forth above, claim 16 is patentable over the combination of Pantini with Cheetam. Moreover, claim 16 is not rejected over the combination of Pantini, Cheetam, Schliemann-Willers, Randall and Siddiqui as evidenced by Fomblin and further in view of Menzel. Thus, claims 31-34 and 37, which depend either directly or indirectly from claim 16, are also patentable over the combination of Pantini, Cheetam, Schliemann-Willers, Randall and Siddiqui as evidenced by Fomblin and further in view of Menzel.

Accordingly, Appellant respectfully requests that this rejection be overturned.

VIII. CLAIMS APPENDIX

16. A cosmetic and/or dermatological composition for topical use comprising, as active substances, polyphenols in association with a suitable carrier, wherein said composition contains an amount of at least one perfluoropolyether phosphate which is effective for stabilizing said polyphenols against oxidative degradation.

17. A cosmetic and/or dermatological composition according to claim 16, wherein said stabilizing agent is a perfluoropolyether diphosphate according to formula (I)



wherein

X = 1 or 2;

R₁ and R₂ are independently selected between H and CH₃;

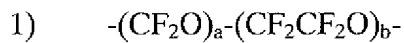
n is an integer between 1 and 50;

R_f is a perfluoropolyether chain with a number average molecular weight between 400 and 1800, comprising repeating units selected from the following:

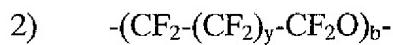
- a) -(C₃F₆O)-
- b) -(CF₂CF₂O)-
- c) -(CFL₀O)-, wherein L₀ = F, -CF₃;
- d) -CF₂(CF₂)_yCF₂O-, wherein y = 1 or 2;
- e) -CH₂CF₂CF₂O-,

and wherein, when x = 1, an end group is a perfluoroalkyl selected from CF₃O, C₂F₅O, C₃F₇O.

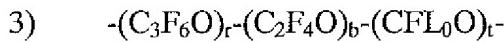
18. A composition according to claim 17, wherein R_f has one of the following structures:



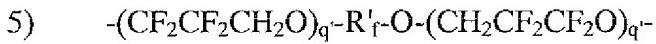
wherein b/a lies between 0.3 and 10 and a is an integer different from 0;



wherein y = 1 or 2;

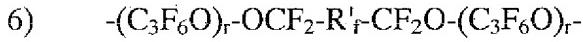


wherein r/b = 0.5-2.0, (r+b)/t = 10-30, b and t are integers different from 0;



wherein R'_f is a fluoroalkylene group with 1-4 carbon atoms;

L₀ is chosen between F and CF₃;



wherein in the above formulas:

-(C₃F₆O)- represents units of formula:

-(CF(CF₃)CF₂O)- and/or -(CF₂-CF(CF₃)O)-

a, b, b', q', r, t are integers, whose sum is such that R_f has values of number average molecular weight M_n of between about 400 and about 1800.

19. A composition according to claim 16, wherein the perfluoropolyether phosphates are perfluoropolyether diphosphates of formula (II):



wherein n = 1 or 2, b/a = 0.5-3.0 and a, b and r have the meanings reported in claim 18.

20. A composition according to claim 16, wherein said at least one perfluoropolyether diphosphate is contained in an amount of between 0.1 and 5.0% by weight of total composition weight.

21. A composition according to claim 20, wherein said at least one perfluoropolyether diphosphate is contained in an amount of between 0.2 and 1.0% by weight of total composition weight.

22. A composition according to claim 19, wherein said at least one perfluoropolyether diphosphate is contained in an amount of between 0.1 and 5.0% by weight of total composition weight.

23. A composition according to claim 20, wherein the polyphenol content is in an amount of between 0.1% and 5% by weight of total composition weight.

24. A composition according to claim 22, wherein the polyphenol content is in an amount of between 0.1% and 5% by weight of total composition weight.

25. A composition according to claim 16, further including vitamin E.

26. A composition according to claim 22, further including vitamin E.

27. A composition according to claim 24, further including vitamin E.

28. A composition according to claim 25, wherein said vitamin E is contained in an amount of between 0.5 and 10% by weight of total composition weight.

29. A composition according to claim 26, wherein said vitamin E is contained in an amount of between 0.5 and 10% by weight of total composition weight.

30. A composition according to claim 27, wherein said vitamin E is contained in an amount of between 0.5 and 10% by weight of total composition weight.

31. A composition according to claim 16, further including ascorbic acid.

32. A composition according to claim 25, further including ascorbic acid.
33. A composition according to claim 31, wherein the ascorbic acid is contained in an amount of between 0.1 and 10% by weight of total composition weight.
34. A composition according to claim 32, wherein the ascorbic acid is contained in an amount of between 0.1 and 10% by weight of total composition weight.
35. A composition according to claim 16, further including at least one compound selected from the group consisting of vitamin A, carotenes, carotenoids, lutein, lycopene and xanthophylls.
36. A composition according to claim 25, further including at least one compound selected from the group consisting of vitamin A, carotenes, carotenoids, lutein, lycopene and xanthophylls.
37. A composition according to claim 32, further including at least one compound selected from the group consisting of vitamin A, carotenes, carotenoids, lutein, lycopene and xanthophylls.
38. A composition according to claim 16, which is in the form of a cream.
42. A composition according to claim 18, wherein R_f has values of number average molecular weight M_n of between about 500 and about 1300.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.

FEES

Payment by credit card in the amount of Five Hundred Forty Dollars (\$540.00) is being concurrently made with the filing of this paper to cover the fee set forth in 37 C.F.R. §41.20(b)(2) for a large entity.

It is believed that no fees other than those paid concurrently are due in connection with the filing of this paper. However, should it be deemed that any other fee is due in connection with this paper, authorization is hereby given to charge such fee to Deposit Account No. 02-2275.

Respectfully submitted

Date: August 19, 2011

LUCAS & MERCANTI, LLP

By: /Silvia Salvadori/
Silvia Salvadori, Reg. No. 48,265
475 Park Avenue South
New York, NY 10016
Phone: (646) 783-6758
Fax: (212) 661-8002